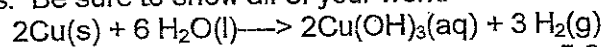


11/15

1. Using the following balanced equation and information below it, find the missing mass. Be sure to show all of your work.



m = ?

M = 63.55 g/mol

m = 5.6 g

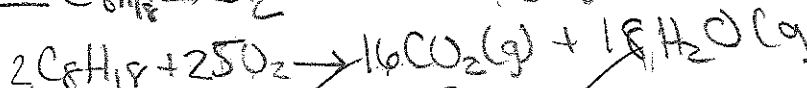
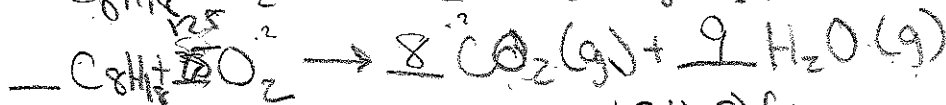
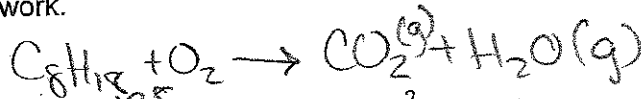
M = 2.02 g/mol

mol = 2.77 mols

$$\frac{5}{3} \times 2.77 \times 2 = 1.848 \text{ mols (unknown)}$$

$$n = m/M \quad 1.848 = \frac{m}{63.55} \quad \text{mass} = 117.45 \text{ g}$$

2. How many grams of octane will be needed to form 83.5 grams of carbon dioxide in a combustion reaction? Be sure to include a balanced equation and to show all of your work.



m = ?

114.26 g/mol

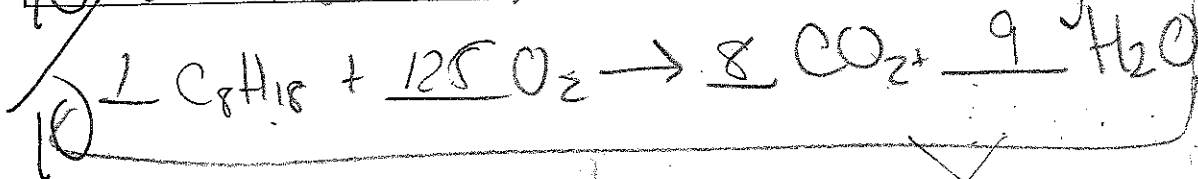
m = 83.5 g

44.01 g/mol

mol = 1.897296069

$$1.897296069 \times \frac{2}{16} = 0.237167008$$

$$0.237167008 \times m / 114.26 \quad \text{mass} = 27.1 \text{ g}$$



x2

25